

In the claims:

Please cancel claims 5-10, 15, 20, 25, 30-32, amend claims 1, 4, 11, 13, 16-18, 21, 23, 26 and 28 as follows:

1. (currently amended) A method for concealing errors in an encoded bit stream indicative of speech signals received in a speech decoder, wherein the encoded bit stream includes a plurality of speech frames arranged in speech sequences, and the speech frames include at least one partially corrupted frame preceded by one or more non-corrupted frames, wherein the partially corrupted frame includes a first long-term prediction lag value and a first long-term prediction gain value, and the non-corrupted frames include second long-term prediction lag values and second long-term prediction gain values, ~~and wherein the second long-term prediction lag values include a last long-term prediction lag value, and the second long-term prediction gain values include a last long-term prediction gain value,~~ said method comprising the steps of:

providing an upper limit and a lower limit based on the second long-term prediction lag values;

determining whether the first long-term prediction lag value is within or outside the upper and lower limits;

replacing the first long-term prediction lag value in the partially corrupted frame with a third lag value, when the first long-term prediction lag value is outside the upper and lower limits; and

retaining the first long-term prediction lag value in the partially corrupted frame when the first long-term prediction lag value is within the upper and lower limits.

2. (original) The method of claim 1, further comprising the step of replacing the first long-term prediction gain value in the partially corrupted frame with a third gain value, when the first long-term lag value is outside the upper and lower limits.

3. (original) The method of claim 1, wherein the third lag value is calculated based the second long-term prediction lag values and an adaptively-limited random lag jitter bound by further limits determined based on the second long-term prediction lag values.

4. (currently amended) The method of claim 2, wherein the third gain value is calculated based on ~~of~~ the second long-term prediction gain values and an adaptively-limited random gain jitter bound by limits determined based on the second long-term prediction gain values.

Claims 5 – 10 (canceled)

11. (currently amended) A speech signal transmitter and receiver system for encoding speech signals in an encoded bit stream and decoding the encoded bit stream into synthesized speech, wherein the encoded bit stream includes a plurality of speech frames arranged in speech sequences, and the speech frames include at least one partially corrupted frame preceded by one or more non-corrupted frames, wherein the partially corrupted frame includes ~~frame~~ a first long-term prediction lag value and a first long-term prediction gain value, and the non-corrupted frames include second long-term prediction lag values and second long-term prediction gain values, and ~~wherein the second long-term prediction lag values include a last long-term prediction lag value and the second long-term prediction gain values include a last long-term prediction gain value, and the speech sequences include stationary and non-stationary speech sequences,~~ and a first signal is used to indicate the partially corrupted frame, said system comprising:

a first means, responsive to the first signal, for determining whether the ~~speech sequence in which the corrupted frame is arranged is stationary or non-stationary~~ first long term prediction lag is within an upper limit and a lower limit, and for providing a second signal indicative of said determining;

a second means, responsive to the second signal, for replacing the first long-term prediction lag value in the partially corrupted frame ~~with the last long-term prediction lag value when said speech sequence is stationary, and replacing the first long-term prediction lag value in the corrupted frame with a third lag value when said speech sequence is non-stationary~~ the first long-term prediction lag value is outside the upper and lower limits; and retaining the first long-term prediction lag value in the partially corrupted frame when the first long-term prediction lag value is within the upper and lower limits.

12. (original) The system of claim 11, wherein the third lag value is determined based on the second long-term prediction lag values and an adaptively-limited random lag jitter.

13. (currently amended) The system of claim 11, wherein the second means further replaces the first long-term prediction gain value in the partially corrupted frame with a third gain value when ~~said speech sequence is non-stationary~~ when the first long-term prediction lag value is outside the upper and lower limits.

14. (original) The system of claim 13, wherein the third gain value is determined based on the second long-term prediction gain values and an adaptively-limited random gain jitter.

15. (canceled)

16. (currently amended) A decoder for synthesizing speech from an encoded bit stream, wherein the encoded bit stream includes a plurality of speech frames arranged in speech sequences, and the speech frames include at least one partially corrupted frame preceded by one or more non-corrupted frames, wherein the partially corrupted frame includes a first long-term prediction lag value and a first long-term prediction gain value, and the non-corrupted frames include second long-term prediction lag values and second long-term prediction gain values, ~~and wherein the second long-term prediction lag values include a last long-term prediction lag value and the second long-term prediction gain values include a last long-term prediction gain value and the speech sequences include stationary and non-stationary speech sequences,~~ and a first signal is used to indicate the partially corrupted frame, said decoder comprising:

a first means, responsive to the first signal, for determining whether the ~~speech sequence in which the corrupted frame is arranged is stationary or non-stationary~~ first long-term prediction lag is within an upper limit and a lower limit, and for providing a second signal indicative of said determining;

a second means, responsive to the second signal, for replacing the first long-term prediction lag value in the partially corrupted frame ~~with the last long-term prediction lag value when said speech sequence is stationary, and replacing the first long-term prediction lag value in the corrupted frame with a third lag value when said speech sequence is non-stationary~~ the first

long-term prediction lag value is outside the upper and lower limits; and retaining the first long-term prediction lag value in the partially corrupted frame when the first long-term prediction lag value is within the upper and lower limits.

17. (currently amended) The decoder of claim 16, wherein the third lag value is determined based on the second long-term prediction lag values and an adaptively-limited random lag jitter.

18. (currently amended) The decoder of claim 16, wherein the second means further replaces the first long-term gain value in the partially corrupted frame with a third gain value when ~~said speech sequence is non-stationary~~ the first long-term prediction lag value is outside the upper and lower limits.

19. (original) The decoder of claim 18, wherein the third gain value is determined based on the second long-term prediction gain values and an adaptively-limited random gain jitter.

20. (canceled)

21. (currently amended) A mobile station, which is arranged to receive an encoded bit stream containing speech data indicative of speech signals, wherein the encoded bit stream includes a plurality of speech frames arranged in speech sequences, and the speech frames include at least one partially corrupted frame preceded by one or more non-corrupted frames, wherein the partially corrupted frame includes a first long-term prediction lag value and a first long-term prediction gain value, and the non-corrupted frames include second long-term prediction lag values and second long-term prediction gain values, ~~and wherein the second long-term prediction lag values include a last long-term prediction lag value and the second long-term prediction gain values include a last long-term prediction gain value and the speech sequences include stationary and non-stationary speech sequences,~~ and wherein a first signal is used to indicate the corrupted frame, said mobile station comprising:

a first means, responsive to the first signal, for determining whether the ~~speech sequence in which the corrupted frame is arranged is stationary or non-stationary~~ first long-term prediction

lag is within an upper limit and a lower limit, and for providing a second signal indicative of said determining;

a second means, responsive to the second signal, for replacing the first long-term prediction lag value in the partially corrupted frame ~~with the last long-term prediction lag value when said speech sequence is stationary, and replacing the first long-term prediction lag value in the corrupted frame~~ with a third lag value when ~~said speech sequence is non-stationary~~ the first long-term prediction lag value is outside the upper and lower limits; and retaining the first long-term prediction lag value in the partially corrupted frame when the first long-term prediction lag value is within the upper and lower limits.

22. (original) The mobile station of claim 21, wherein the third lag value is determined based on the second long-term prediction lag values and an adaptively-limited random lag jitter.

23. (currently amended) The mobile station of claim 21, wherein the second means further replaces the first long-term gain value in the partially corrupted frame with a third gain value when ~~said speech sequence is non-stationary~~ the first long-term prediction lag value is outside the upper and lower limits.

24. (original) The mobile station of claim 23, wherein the third gain value is determined based on the second long-term prediction gain values and an adaptively-limited random gain jitter.

25. (canceled)

26. (currently amended) An element in a telecommunication network, which is arranged to receive an encoded bit stream containing speech data from a mobile station, wherein the speech data includes a plurality of speech frames arranged in speech sequences, and the speech frames include at least one partially corrupted frame preceded by one or more non-corrupted frames, wherein the partially corrupted frame includes a first long-term prediction lag value and a first long-term prediction gain value, and the non-corrupted frames include second long-term prediction lag values and second long-term prediction gain values, ~~and wherein the second long-term prediction lag values include a last long-term prediction lag value and the second long-term~~

~~prediction gain values include a last long-term prediction gain value and the speech sequences include stationary and non-stationary speech sequences, and wherein a first signal is used to indicate the corrupted frame, said element comprising:~~

~~a first means, responsive to the first signal, for determining whether the speech sequence in which the corrupted frame is arranged is stationary or non-stationary~~ first long-term prediction lag is within an upper limit and a lower limit, and for providing a second signal indicative of said determining;

~~a second means, responsive to the second signal, for replacing the first long-term prediction lag value in the partially corrupted frame with the last long-term prediction lag value when said speech sequence is stationary, and replacing the first long-term prediction lag value in the corrupted frame with a third lag value when said speech sequence is non-stationary~~ the first long-term prediction lag value is outside the upper and lower limits; and retaining the first long-term prediction lag value in the partially corrupted frame when the first long-term prediction lag value is within the upper and lower limits.

27. (original) The element of claim 26, wherein the third long-term prediction lag value is determined based on the second long-term prediction lag values and an adaptively-limited random lag jitter.

28. (currently amended) The element of claim 26, wherein the third means further replaces the first long-term prediction gain value with a third gain value ~~when said speech sequence is non-stationary~~ when the first long-term lag value is outside the upper and lower limits.

29. (original) The element of claim 28, wherein the third gain value is determined based on the second long-term prediction gain values and an adaptively-limited random gain jitter.

Claims 30-32 (canceled)